

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 20

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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Ex parte YOSHIO NAKAMURA et al.

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Appeal No. 2003-2113  
Application No. 09/712,582

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ON BRIEF

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Before FRANKFORT, McQUADE, and NASE, Administrative Patent Judges.  
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 3, 6 and 9, which are all of the claims pending in this application.

We REVERSE.

### BACKGROUND

The appellants' invention relates to a plate type heat pipe. A copy of the claims under appeal is set forth in the opinion section below.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Tanzer	5,029,389	July 9, 1991
Sun et al. (Sun)	5,465,782	Nov. 14, 1995
Groll	DE 2 110 865 <sup>1</sup>	Jan. 13, 1972
Obukhov	SU 808826 <sup>2</sup>	Feb. 28, 1981

Claims 3, 6 and 9 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the appellants, at the time the application was filed, had possession of the claimed invention.

Claims 3 and 9 stand rejected under 35 U.S.C. § 103 as being unpatentable over Sun in view of Tanzer and Groll.

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<sup>1</sup> In determining the teachings of Groll, we will rely on the translation provided by the USPTO. A copy of the translation is attached for the appellants' convenience.

<sup>2</sup> In determining the teachings of Obukhov, we will rely on the translation provided by the USPTO. A copy of the translation is attached for the appellants' convenience.

Claim 6 stands rejected under 35 U.S.C. § 103 as being unpatentable over Sun in view of Tanzer, Groll and Obukhov.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the answer (Paper No. 14, mailed February 25, 2003) for the examiner's complete reasoning in support of the rejections, and to the brief (Paper No. 13, filed December 2, 2002) for the appellants' arguments thereagainst.

#### OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

The claims under appeal read as follows:

3. A plate type heat pipe, comprising:
  - an extruded pipe having two ends and having a plurality of through holes defined by a plurality of longitudinally extending partition walls having portions removed at the ends of said pipe;
  - a working fluid received in said pipe;
  - two end caps, one positioned at each end of said pipe to hermetically seal said pipe, the working fluid in one through hole communicating with the working

fluid in another through hole as a result of said removed portions of said partition walls;

one of a non-porous, straight wire and non-porous, straight wire mesh movably positioned within said through hole such that a narrow space is formed between an inner wall of said partition wall forming said through hole and a side portion of said straight wire and wire mesh so as to cause sufficient capillary action.

6. A plate type heat pipe as claimed in claim 3, wherein said wire comprises a twisted wire.

9. A plate type heat pipe as claimed in claim 3, wherein a cap portion is joined near each of said end portions of said through hole.

The claims define the property rights provided by a patent, and thus require careful scrutiny. The goal of claim analysis is to identify the boundaries of the protection sought by the applicant and to understand how the claims relate to and define what the applicant has indicated is the invention. USPTO personnel must first determine the scope of a claim by thoroughly analyzing the language of the claim before determining if the claim complies with each statutory requirement for patentability. See In re Hiniker Co., 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). Thus, before reviewing the rejections under appeal we must first determine the scope of the claims under appeal.

We understand claim 3 as being drawn to a plate type heat pipe, comprising, inter alia, (1) an extruded pipe having two ends and having a plurality of through holes

defined by a plurality of longitudinally extending partition walls having portions removed at the ends of the pipe; (2) a working fluid received in the pipe; (3) two end caps, one positioned at each end of the pipe to hermetically seal the pipe wherein the working fluid in one through hole communicates with the working fluid in another through hole as a result of the removed portions of the partition walls; and (4) one of a non-porous, straight wire and non-porous, straight wire mesh movably positioned within the through hole such that a narrow space is formed between an inner wall of the partition wall forming the through hole and a side portion of the non-porous, straight wire or the non-porous, straight wire mesh so as to cause sufficient capillary action.<sup>3</sup>

We understand the limitation of claim 6 that "said wire comprises a twisted wire" to mean that the non-porous, straight wire is formed by a plurality of twisted strands.<sup>4</sup> We also understand the limitation of claim 9 that "a cap portion is joined near each of said end portions of said through hole" to mean that each end cap has a cap portion which is joined near each of said end portions of said through holes.<sup>5</sup>

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<sup>3</sup> We suggest that the appellants amend claim 3 as follows: change "such that a narrow space is formed between an inner wall of said partition wall forming said through hole and a side portion of said straight wire and wire mesh so as to cause sufficient capillary action" to be "such that a narrow space is formed between an inner surface of said partition wall forming said through hole and a side portion of said non-porous, straight wire or said non-porous, straight wire mesh so as to cause sufficient capillary action."

<sup>4</sup> We suggest that the appellants amend claim 6 to reflect this understanding.

<sup>5</sup> We suggest that the appellants amend claim 9 to reflect this understanding.

With these understandings of the scope of claims 3, 6 and 9, we turn to the rejections under appeal.

### **The written description rejection**

We will not sustain the rejection of claims 3, 6 and 9 under 35 U.S.C. § 112, first paragraph.

The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claim language. See Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1116-17 (Fed. Cir. 1991) and In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983).

The basis for the examiner's written description rejection (answer, p. 3) is that the originally filed specification fails to disclose (1) both a straight wire and a straight wire mesh; (2) the wire being both a straight wire and a twisted wire or the mesh being a twisted wire; and (3) both end caps and a cap portion.

Since claims 3, 6 and 9 on appeal are original claims, nothing more is required in this case for compliance with the description requirement of the first paragraph of 35 U.S.C. § 112. See In re Gardner, 475 F.2d 1389, 1391, 177 USPQ 396, 397, supplemental opinion, 480 F.2d 879, 879-80, 178 USPQ 149 (CCPA 1973) and In re Smith, 481 F.2d 910, 914, 178 USPQ 620, 624 (CCPA 1973). Moreover, as set forth above in our determination of the scope of claims under appeal, claim 3 is not drawn to both a straight wire and a straight wire mesh but is drawn to a straight wire or a straight wire mesh; claim 6 is not drawn to the wire being both a straight wire and a twisted wire or the mesh being a twisted wire but to the straight wire being formed by a plurality of twisted strands; and claim 9 is not drawn to both end caps and a cap portion but to end caps each having a cap portion.

For the reasons set forth above, the decision of the examiner to reject claims 3, 6 and 9 under 35 U.S.C. § 112, first paragraph, is reversed.

### **The obviousness rejections**

We will not sustain the rejection of claims 3, 6 and 9 under 35 U.S.C. § 103.

A case of obviousness is established by presenting evidence that would have led one of ordinary skill in the art to combine the relevant teachings of the references to

arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) and In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

The pertinent teachings of the applied prior art have been adequately set forth in the answer (pp. 4-5) and the brief (pp. 4-5). Based on our analysis and review of Sun and claim 3, the only independent claim on appeal, it is our opinion that the differences<sup>6</sup> are: (1) "two end caps, one positioned at each end of said pipe to hermetically seal said pipe, the working fluid in one through hole communicating with the working fluid in another through hole as a result of said removed portions of said partition walls;" and (2) "one of a non-porous, straight wire and non-porous, straight wire mesh movably positioned within said through hole such that a narrow space is formed between an inner wall of said partition wall forming said through hole and a side portion of said straight wire and [sic, or] wire mesh so as to cause sufficient capillary action."

With regard to the first difference, the examiner determined (answer, p. 4) that such difference would have been obvious at the time the invention was made to a person of ordinary skill in the art from the teachings of Tanzer. We agree. With regard

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<sup>6</sup> After the scope and content of the prior art are determined, the differences between the prior art and the claims at issue are to be ascertained. Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).



to the second difference, the examiner determined (answer, p. 5) that such difference would have been obvious at the time the invention was made to a person of ordinary skill in the art from the teachings of Groll. We do not agree. In our view, the applied prior art does not make it obvious at the time the invention was made to a person of ordinary skill in the art to have provided either (1) a non-porous, straight wire **movably** positioned within the through hole such that a narrow space is formed between an inner wall of the partition wall forming the through hole and a side portion of the straight wire so as to cause sufficient capillary action; or (2) a non-porous, straight wire mesh **movably** positioned within the through hole such that a narrow space is formed between an inner wall of the partition wall forming the through hole and a side portion of the straight wire mesh so as to cause sufficient capillary action. In that regard, we note for example that the wire mesh 18 shown in Figure 9 of Groll is **fixedly** positioned within the through hole, not **movably** positioned within the through hole.

Since the applied prior art is not suggestive of the claimed subject matter for the reasons set forth above, the decision of the examiner to reject claims 3, 6 and 9 under 35 U.S.C. § 103 is reversed.

CONCLUSION

To summarize, the decision of the examiner to reject claims 3, 6 and 9 under 35 U.S.C. § 112, first paragraph, is reversed and the decision of the examiner to reject claims 3, 6 and 9 under 35 U.S.C. § 103 is reversed.

REVERSED

CHARLES E. FRANKFORT  
Administrative Patent Judge

JOHN P. McQUADE  
Administrative Patent Judge

JEFFREY V. NASE  
Administrative Patent Judge

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Appeal No. 2003-2113  
Application No. 09/712,582

Page 11

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